Changes in FRANX Version 4.1

- If your model included negation logic, such as used to approximate mutually exclusive events, it was possible to get a CCDP of zero when a fire led to core damage. FRANX has been modified to create a dummy event [TRUE] into the fault tree to prevent this problem. See user manual for restrictions. (TT3686).

- Previously, if you unselected an impacted item, the software would unselect it in all locations of the mapping hierarchy. This made it more complicated to have a direct impact but not a cable impact, or vice versa. FRANX has been modified to keep track of exclusions based on the parent item.

- Previously, there were problems using "Altered Events." In some cases, your changes would not be saved. In addition, it was difficult to modify the database externally. You were also not allowed to use "Altered Events" with the one-top construction because the target events name would change from one run to another (among other reasons). FRANX has been modified to use a separate table for "Altered Events," and a fixed target name will be created based on your input.

- Previously, FRANX did not function if basic event names (or other mapped items) contained wildcard characters (* or ?). This problem has been corrected so that the wildcard processing works correctly. It is still not recommended that basic events contain wildcard characters (TT3751).

- FRANX includes a new version of QRecover, which includes the ability to pass the "TRUES list" to chained recovery rules.

- A problem was corrected in which the CAFTA database lock file (for example, demo.ldb) was incorrectly remaining on the disk after completion.

- The "Show Status Grid" feature now automatically recalculates the system states so you do not accidentally view old information.

- The "Total CDF" now shows on the status line.

- This version includes the latest version of the R&R workstation support libraries. This includes the following changes:

    - QRecover (2.8, 10/2010):
        - Corrects a problems when using QRecover from a .NET application (e.g. PRAQuant of FRANX) when on a 64-bit operating system

        - Now includes the ability to pass the "TRUES list" to chained recovery rules.
        - The SORT rule now sorts both the cutsets by probability and the event names within each cutset (with initiators first and recoveries last)
    - RDAPI.DLL
        - Now tolerates the absence of the Btrieve database driver
        - The 'raw' filter was updated to now read raw-format cutsets much faster.
    - Equations (3.5, 9/2009):
        - Renamed Str2No and No2Str to be Str2Num and Num2Str, and removed StrRev()
        - Added CummNormal, InvNormal, CummLogN (_med & _mean), InvLogN (_med & _mean)
        - Added Comb() and Perm()
    - Browser (5.4.1, 10/2010):
        - Minor display issues have been corrected

Calculational Differences

In most cases, you should get the exact same results as using the previous version of FRANX. In a few cases, you may get different results.

- For scenarios that cause core damage, you may get a 1.0 value when you previously calculated a 0.0 value.

- Some features of the new version are not backward-compatible with the previous version. If you create a model with version 4.1 and then attempt to run it using version 4.0, you may get different results. This will happen, for example, if you use "Altered Events," or if you exclude multiple-mapped items in one place but not in others.

Database changes

To enable the new features, new tables and new fields have been added to the database. These new elements will automatically be constructed for you, and the data will be converted as needed.